

TREATMENT OF PRESBYOPIA AND OTHER EYE DISORDERS
USING A DUAL-LASER SCANNING SYSTEM*Scanning Laser**Abstract of the Disclosure*

Presbyopia is treated by a method which uses ablative lasers to ablate the sclera tissue and increase the accommodation of the ciliary body. Tissue bleeding is prevented by a dual-beam system which consists of ablative and coagulative lasers. The preferred embodiments of the present invention include a short pulse ablative laser (pulse duration less than 200 nanoseconds) having a wavelength of between 0.15 and 3.2 microns and a long pulse (longer than 200 nanoseconds) coagulative laser having a wavelength range of between 0.5 and 10.6 microns. A scanning system is proposed to perform various patterns on the sclera area of the cornea to treat presbyopia and to prevent other eye disorder such as glaucoma. Laser parameters are determined for accurate sclera expansion.

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